DOCUMENT RESUME

ED 093 350 IR 000 837

TITLE	Educational Media and Technology: Publications from ERIC at Stanford 1967-1973. An ERIC Bibliography.
INSTITUTION	Stanford Univ., Calif. ERIC Clearinghouse on Information Resources.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	Aug 74
CONTRACT	NIE-C-74-0027
NOTE	17p.
AVAILABLE FROM	Box E, School of Education, Stanford University, Stanford, California 94305 ($2.50)
EDRS PRICE	MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS	Annotated Bibliographies; Audiovisual Instruction; Computer Assisted Instruction; Educational Radio; *Educational Technology; *Educational Television; Instructional Innovation; Instructional Materials Centers; *Instructional Media; Instructional Technology; Simulation
IDENTIFIERS	ERIC Clearinghouse Educational Media Technology

ABSTRACT

All 59 documents published by the Educational Resources Information Center on Educational Media and Technology (ERIC/EM) are abstracted in this document. The abstracts are the same as those which appeared in Research in Education (RIE), ERIC's monthly catalog. They are arranged alphabetically by author. With only two exceptions (journal articles and material available only from the Association for Educational Communications and Technology), all materials are available from the ERIC Document Reproduction Service. Many also are available from Stanford's School of Education. (WCM)

An ERIC Bibliography

ED 093350

EDUCATIONAL MEDIA AND TECHNOLOGY: PUBLICATIONS FROM ERIC AT STANFORD 1967-1973

A Collection of Abstracts of All Papers Published by the ERIC Clearinghouse on Educational Media and Technology at Stanford University

IR 000 837

Published by the ERIC Clearinghouse on Information Resources,
Stanford Center for Research and Development in Teaching,
School of Education, Stanford University, Stanford, California

PREFACE

During its six years of existence at Stanford University, the ERIC Clearinghouse on Educational Media and Technology produced and published 59 documents dealing with its scope area. These publications range from research-oriented studies to basic classroom "how-to" guides.

The ERIC Clearinghouse on Educational Media and Technology (ERIC/EM) was located from June 1967 to December 1973 in the Institute for Communication Research at Stanford, first under the direction of Dr. Wilbur Schramm, and later under Drs. William Paisley and Don Coombs.

It then moved to the School of Education's Stanford Center for Research and Development in Teaching, and was under the directorship of Dr. Richard Clark. In January 1974, ERIC/EM was joined by the ERIC Clearinghouse on Library and Information Sciences, resulting in the new ERIC Clearinghouse on Information Resources.

It was decided to bring out this ERIC/EM bibliography as a documentation of the Clearinghouse's contributions to the field of media and technology, and as an answer to a number of requests for such a publication.

This paper includes ERIC abstracts of all 59 documents published by ERIC/EM. The abstracts are the same as those which appear in Research in Education (RIE), ERIC's monthly catalog. They are arranged alphabetically by author. With only two exceptions (journal articles and material available only from the Association for Educational Communications and Technology), all materials are available from the ERIC Document Reproduction Service. Many also are available from Stanford's School of Education.

ORDERING INFORMATION

To order ERIC documents in either microfiche or Xerox hardcopy, send a check for the purchase price to ERIC Document Reproduction Service, P.O. Box 190, Arlington, Virginia 22210. Always order by ED number. Individual Clearinghouses cannot fill these requests. Include 18c postage for first pound (60 fiche or 100 hardcopy pages); 8c for each additional half-pound.

DISCLAIMER NOTICE

The material in this publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgement in professional and technical matters. Prior to publication, the manuscript was submitted to Publishing Services of the American Library Association for critical review and determination of professional competence. This publication has met such standards. Points of view or opinions, however, do not necessarily represent the official view or opinions of either the American Library Association or the National Institute of Education.

* * *

ERIC stands for Educational Resources Information Center, funded by the National Institute of Education.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

(Abstracts are arranged alphabetically by authors' last names.)

Copyright Considerations in Educational Broadcasting

Eugene N. Aleinikoff. 1972. 14 pages. EDRS price microfiche 75c, hardcopy $1.50 (ED 070 316).

The discussion of copyright law presented here begins with a summary of a few basic aspects of American copyright law. It then goes on to discuss the particular application of this law to educational broadcasting by explaining first copyright law itself and then the historical doctrine of "fair use". "Fair use" is not mentioned in the copyright law but has been progressively developed by the American court to avoid unduly harsh copyright enforcement. The specific application of these principles of law to the use of books and periodicals, music and records, motion pictures, television programs, filmstrips, and photographs is discussed in regard to their use in educational broadcasts. Some of the most recent developments in copyright litigation are briefly summarized in conclusion. A selected bibliography is appended.

Trends in Instructional Technology: The ERIC at Stanford Planning Report

William H. Allen and Don H. Coombs. 1970. 32 pages. EDRS price microfiche 75c, hardcopy $1.85 (ED 043 242).

In response to a questionnaire from the ERIC Clearinghouse on Educational Media and Technology, 40 leaders in the field gave their opinion of the present and future of instructional technology, both in its broad and narrow (machine aids) sense. Their opinions were thus the basis of a panel discussion by an advisory council that met in Washington, D.C. Questions bore upon the accomplishments, the trends, and the effective use of instructional technology. Some of its accomplishments were considered to be the individualization of instruction, the application of the systems approach to education, the development of trained personnel, the establishment of a public service system of broadcasting and the demonstrated effectiveness of instructional technology. Among trends mentioned were the application of research to the development of large-scale systems, cost-effectiveness and accountability measures, and validated multi-media packages. Measures recommended to achieve effective use of instructional technology include development of training programs, establishment of experimental and demonstration schools, winning educator acceptance, and expansion of efforts to develop instructional materials. Verbatim responses to the questions are listed with the number of persons making each response specified.

The Working Teacher's Personal Guide to Film Sources

Jaclyn Caselli. 1973. 21 pages. EDRS price microfiche 75c, hardcopy $1.50 (ED 066 926). Also available for $1.50 from Box E, School of Education, Stanford University, Stanford, California 94305. Checks made payable to "Box E" must be included with order.

Designed for the grammar and high school teacher who spends a great deal of time in the classroom, this booklet provides a convenient, useful guide to film sources and to film producers and distributors which cater to grammar and high schools. A list of film sources gives name, address, and grade range of materials offered. Also included is an annotated list of references on the use of film in the classroom.

Who Is Talking to Our Children? Third National Symposium on Children and Television, Yale University, New Haven, Connecticut, October 15-17, 1972

Peggy Charren and Evelyn Sarson. 1973. 68 pages. Available from: Action for Children's Television, 46 Austin Street, Newtonville, Massachusetts 02160 ($5.00), and Box E, School of Education, Stanford University, Stanford, California 94305 ($5.00). EDRS price microfiche 75c, hardcopy $3.15 (ED 077 244).

Action for Children's Television (ACT), with financial support from the Ford Foundation, presented the Third National Symposium on Children and Television at Yale University in October, 1972. It brought together childhood professionals, such as pediatricians, nursery school directors, and child psychologists, and media people such as broadcasters, producers, and television executives, to consider the effects of television on children and to review the efforts the media have made to provide quality programing for children. The former group discussed the impact of television on such aspects of children's lives as their fantasy and play worlds and their concept of death, while the latter examined their own philosophy and the criteria by which they make decisions. Other major topics were the economic traits of the industry, the possible alternative sources of future funding, and the directions in which changes might be made.

Children and Television. A Special Report From Now Available Member 28

1972. 8 pages. EDRS price microfiche 75c, hardcopy $1.50 (ED 070 287).

During October 1972, two events of national scope focused the attention of educators, parents, and politicians alike upon the subject of children and television. Three days of panels climaxed 32 months of FCC (Federal Communications Commission) inquiry into children's television. The Third National Symposium on Children and Television, sponsored by Action for Children's Television (ACT), was held at Yale University. First-hand reports of both these gatherings are presented in this report.

Learning From Television, What the Research Says

Godwin C. Chu and Wilbur Schramm. 1967. 222 pages. EDRS price microfiche 75c, hardcopy $10.20 (ED 014 900).

Sixty propositions in six areas concerning the conditions of effective learning from television are developed from a survey of the research literature-- 1)how much pupils learn from instructional television, 2)efficient use of the medium in a school system, 3)treatment, situation, and pupil variables, 4)attitudes toward instructional television, 5)television in developing regions, 6)learning from television compared with learning from other media. Evidence for each proposition is briefly summarized. Literature search depended partly on abstracts, partly on complete documents, and included foreign as well as U.S. research. It is concluded from overwhelming evidence that television can be an efficient tool of learning and teaching. When it is not efficient, the reason is usually in the way it is used. Evidence favors the integration of television into other instruction, simplicity rather than "fanciness", emphasis on the basic requirements of good teaching, introduction of the medium so as to minimize resistance, and testing and revision of programs. Whether the television medium is to be preferred, and whether it is feasible for developing regions, depends on objectives and conditions. A selected bibliography of 303 titles is included.

The Best of ERIC: Recent Trends in Computer Assisted Instruction

Richard E. Clark. 1973. 15 pages. EDRS price microfiche 75c, hardcopy $1.50 (ED 076 025).

The current paradox between the increasing interest in the utilization of computer-assisted instruction (CAI) and the decreasing financial support from the Federal Government is briefly surveyed in the introduction of this annotated bibliography. The author also discusses the major problems that are now prevalent in CAI utilization: the lack of specialized programing and the scarcity of research based knowledge. An annotated bibliography of some 40 recent articles is divided into the categories of CAI planning and utilization, case studies of utilization, attitudes toward CAI, cost effectiveness studies, research trends in student-CAI interaction, and the future prospects and policies.

Identifying and Fostering Productive Researchers. An Occasional Paper From ERIC at Stanford

Andrew W. Collins. 1971. 33 pages. EDRS price microfiche 75c, hardcopy $1.85 (ED 047 538).

What are the characteristics of successful students in research training programs and what are the characteristics of successful programs of this type? What are the characteristics of successful mature researchers and what research environments facilitate research of high quality and quantity? Since very little research deals directly with these questions, answers to them are sought in related research literature, and suggestions are made for research that is targeted to this area of investigation. Correlates considered in forecasting success of students are those of previous training and experience, and those of personal and intellectual qualities. Factors considered in determination of characteristics of successful training programs are those of faculty quality, student quality, institutional setting, and academic content of the training curriculum. Productivity of scientists is found to be related to personality profile, intellectual correlates, and work patterns. Themes that stand out in an appraisal of a research environment are: relationships with other scientists in the research setting, relationships and interactions with administrators and supervisors, diversity of interests and activities in the organization, and finally, physical and financial resources available to the scientist.

The Interview: An Educational Research Tool. An Occasional Paper From ERIC at Stanford

Andrew Collins. 1970. 16 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 044 931).

Like all good social research methods, the interview demands careful planning and intelligent administration. The study director formulates the goals of the study, which serve as the basis for the interview schedule or instrument. The interview schedule decided upon may be standardized or unstandardized. Questions may be closed-ended or open-ended. In the field, the interviewer has four major tasks: 1)selecting or locating the respondent, 2)establishing rapport with him, 3)asking the questions in the schedule, and 4)recording the answers. Errors in interview results may be by the respondent himself, by a poor relationship between the interviewer and the respondent, and by the interviewer. Despite possible pitfalls, the interview offers many advantages to people who want to know what other people have to say.

Instructional Materials Centers: A Series Three Collection From ERIC at Stanford

Don H. Coombs and others. 1969. 17 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 034 438).

All relevant documents processed by the Educational Resources Information Center System through August, 1969, on the subject of Instructional Materials Centers are listed and synopsized in this pamphlet. The length of each document is noted and information supplied on the method of obtaining hardcopy and microfiche copies. Most of the documents listed can be ordered individually or as a complete collection of 72 fiche.

One Week of Educational Television Number Five (May 6-12, 1968); UHF-VHF, Closed-Circuit, and ITFS (2500 MHz) Activity

Don H. Coombs. 1969. 128 pages. Available from: The National Instructional Television Center, Box A, Bloomington, Indiana 47401 ($2.00). EDRS price microfiche 75¢, hardcopy $6.60 (ED 029 501).

This census of a week's educational UHF-VHF broadcasting is accompanied by a survey of ITFS (2500 MHz) and closed-circuit television programing. Compared to 1966, there was proportionately more math, less foreign language on UHF-VHF. The trend toward less local production and the trend toward more weekend broadcasting continued; in 1962 78% of instructional television was locally produced, but only 35% was in 1968. School-owned stations produced more than 40% of their programing locally, while state-owned stations received most of theirs from state networks. Both college and community-owned stations depended more on NET (National Educational Television) than on any other source. The 8,534 hours broadcast by the 152 UHF-VHF stations averaged out to 56.1 hours per station per week. Adding in the estimated total closed-circuit hours (13,800) and the estimated total ITFS hours (1,080) produced a grand total of about 23,000 ETV hours in the U.S. that week. (Business and industrial training use were not included in the closed-circuit estimate.) Detailed tables and graphs present the data collected and appendixes discuss aspects of programing and the methodology of the survey. One appendix, published and bound separately, presents the data from the individual stations.

A Basic Reference Shelf on Audio-Visual Instruction. A Series One Paper From ERIC at Stanford

Edgar Dale and Gregory Trzebiatowski. 1968. 20 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 029 491)

Topics in this annotated bibliography on audio-visual instruction include the history of instructional technology, teacher-training, equipment operation, administration of media programs, production of instructional materials, language laboratories, instructional television, programed instruction, communication theory, learning theory, and research. Introductory comments to the bibliography briefly sketch the historical background of audiovisual instruction, the concrete-abstract continuum in which audio-visual materials represent the semi-concrete experience, the effect, good and bad, of pictorial media on pre-school children, and the recent development of the instructional materials center.

A Guide to the Literature on Audiovisual Instruction

Edgar Dale and John Belland. 1971. 20 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 054 615).

The philosophical overview which introduces this review of the literature on audiovisual instruction concentrates on the historical background of the field and its place within the broader fields of communication, education, and communication theory and research. A selected bibliography is provided for the major areas in instructional technology: history and philosophy of the audiovisual movement, organizations and periodicals, instructional and learning theory, communications theory, systems, research, texts and teaching materials, production of audiovisual material, instructional television and film, programed instruction, computer-assisted

instruction, simulation, learning laboratories, administering media programs. equipment and facilities, and media indexes. A brief introduction to each of these topics serves as annotation.

A Basic Reference Shelf on Instructional Media Research. Using Educational Media--Guides to the Literature, Series 1

Jack V. Edling.1967. 12 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 015 674).

This annotated bibliography identifies a basic library for the person desiring to interpret, conduct, or direct research on educational media.

Case Studies: Individualized Instruction

Jack V. Edling. 1970. 92 pages.
Available only as part of larger set of materials from: Jim Wallington, Director of Publications, Association for Educational Communications and Technology, 1201 Sixteenth Street N.W., Washington, D.C. 20036. Contact him for information. Not available from EDRS.(ED 041 452).

Case studies are provided to present the various approaches of 46 different elementary and secondary schools to the complex problem of individualizing instruction. Each case study includes the goals, the instructional techniques, the new teacher skills, the effects on students, the costs, the problems and summary of its program.

West: Report of the Second Annual Conference, February 28-March 2, 1972

Richard B. Elliott. 1972. 173 pages. EDRS price microfiche 75¢, hardcopy $7.80 (ED 064 951).

The 1972 WEST conference report represents a cooperative project of the Western Educational Society for Telecommunications and the ERIC Clearinghouse on Media and Technology. The conference featured discussions of public television, instructional television, cable television, national educational radio, and national public radio, educational broadcasting, and communication satellites. Six speeches are presented in full: the keynote address by James Day; a discussion of the Telecommunications Center by the president of the National Association of Educational Broadcasters (NAEB); a review of the state-of-the-art of cable television; a look at the Public Broadcasting Service (PBS) through the eyes of its president and of the general counsel for the President's Office of Telecommunications Policy; and a brief discussion of some of the plans of the University of California for the use of television, auto-tutorial instruction, dial access systems, and computer-aided instruction in part time degree programs.

Knowledge Linkers and the Flow of Educational Information. An Occasional Paper From ERIC at Stanford

Richard S. Farr. 1969. 17 pages. EDRS price microfiche 75¢, hardcopy $1.50(ED 032 438).

The flow of knowledge from researchers to users is aided by knowledge linkers who activate the interpersonal network of communication within the target audience. The linker enters this network by contacting (through periodicals, mass media, conventions, and directly) individuals in the audience who are more active than others (gatekeepers). Once gatekeepers have been identified, the linker, aware of the stages through which idea adopters must pass before accepting a new idea, must successfully communicate to them an understandable, attention-getting message which arouses personality needs and makes appropriate suggestions to meet these needs. This message is then passed on to the rest of the target audience by word of mouth. The linker must also actively solicit audience needs and apply them to research products, serving as a two-way force for facilitating the flow of information. The linker's role, however, has been complicated by problems such as overload and marginality; when the functions of linkers are institutionalized, these problems, as well as the problems of lack of job security, coordination of activities, and specialization are lessened. (A 13-item bibliography is included.)

Research Utilization: An Annotated Bibliography

Richard S. Farr and Suzanne Pingree. 1970. 72 pages. EDRS price microfiche 75¢, hardcopy $3.15 (ED 039 777).

This annotated bibliography contains selected references to 202 recently published articles and books on the subject of research utilization. Criteria for inclusion in the bibliography are discussed, as well as disciplines and specialities which contribute to the subject of research utilization, a core collection on research utilization which can be derived from the bibliography, "grandfathers" in the field, and 15 generally accepted propositions related to the utilization of research findings.

A Position Paper on CAI Research and Development. A Series Two Paper From ERIC at Stanford

John H. Feldhusen and Paul Lorton Jr. 1970. 33 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 036 204).

After a critical review of the papers on Computer-Assisted Instruction (CAI) of several prominent educators, recommendations are proffered for CAI systems improvements prior to new research. These include replacing the typed message with an inexpensive cathode ray tube, developing the student interface as an efficient and pleasant carrel which affords access to several media, making available time sharing service and terminals to avoid artificial constraints on instruction, developing one set of programing languages for several modes of instruction and for the author mode, and developing some lengthy courses to serve as vehicles of research and as models of CAI potential. Concluding the paper are abstracts of papers by Zinn, Rogers, Kanner, Stolurow, Oettinger and Marks, Kopstein and Seidel, Randall and Blaschke, and General Learning Corporation. These abstracts were reviewed at the beginning of this paper.

Instructional Radio: A Position Paper. A Series Two Paper From ERIC at Stanford

Richard O. Forsythe. 1970. 16 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 044 933).

Although educational radio has been part of the American scene for nearly half a century, it does not enjoy the governmental participation and national commitment that it receives in many other countries. The position of educational radio did improve with the advent of Frequency Modulation (FM) broadcasting, and today there are more than 450 educational radio stations. Radio offers education an ear to the world, timely information, emotional impact, and a sense of involvement. It is currently used for curriculum innovation, in-service teacher training, continuing professional education, community service, and vocational education. A systems approach to education has combined radio with other media: printed materials, filmstrips, television, and tape recordings. Other cooperative media approaches have been made possible by FM multiplex equipment. Experimental studies have indicated that radio is as effective in teaching as the "conventional methods," and that its lack of visual elements is not necessarily a drawback. While radio, like all mass media, lacks the reciprocity and flexibility found in interpersonal discourse, some of these difficulties have been alleviated by recent technical developments. Apathy and financing are still problems. Yet, in comparison with other media, radio is impressively economical.

Behavioral Objectives: A Selected Bibliography and Brief Review

George L. Geis. 1972. 23 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 060 671).

What are behavioral objectives? Why write and use behavioral objectives? Where do behavioral objectives come from? These three questions are answered in some detail in this paper; lists of selected references and resources and an annotated bibliography of "how-to" books accompany the text which summarizes much of the research dealing with behavioral objectives. The author states that behavioral objectives are "the first step in making more effective, systematic, and rational that most precious, most human activity--teaching others."

A Basic Reference Shelf on Programmed Instruction. A Series One Paper From ERIC at Stanford

Robert Glaser and Mary Louise Marino. 1968. 9 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 019 013).

Annotated references are divided into general introductions to programed instruction (including psychological and learning principles), user guides (case studies), programers' manuals (including definition of objectives and program analysis), and references for professionals experienced in programed instruction (theoretical and analytical papers).

Alternative Education: The Free School Movement in the United States

Allan Graubard. 1972. 21 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 066 059).

In this guide to alternative education, the theory and practice of the "free school" movement is discussed from a pedagogical and political viewpoint. The current state of free schools is described and four major types of free schools are identified: Summerhillian, parent-teacher cooperative, free high schools, community elementary. The political and social issues raised by the movement are discussed at some length. The effect of this movement on educational policy is projected. A list of resources is given which includes journals, articles, books, and people, and organizations.

A Basic Reference Shelf on Learning Theory. A Series One Paper From ERIC at Stanford

Ernest R. Hilgard. 1967. 18 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 038 829).

This reference work briefly identifies the salient principles of learning theory under

the subdivisions: 1)S-R theory, 2)cognitive theory, and 3)motivation and personality theory. It also describes various approaches to practical problems via unified theories of learning. A seven-item annotated bibliography on learning theory and its applications is included.

The State of the Art of Instructional Films

Charles F. Hoban. 1971. 37 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 055 432).

The boundaries of knowledge and performance capabilities of instructional films are extending outward, but largely in directions that are somewhat neglected in the professional literature. The use of instructional films is expanding rapidly in volume. Miniaturization of film and projection equipment has been developed, functions of films in instruction are being redefined. Theoretical foundations are emerging in promising directions. Research is advancing at a snail's pace in directions other than classical learning. Logistical organization of film supply is being decentralized, and "media man" is in a transitional stage.

A Basic Reference Shelf on the New Media and Teacher Training. A Series One Paper From ERIC at Stanford

Henry T. Ingle. 1968. 12 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 019 011).

Annotated references encompass research results and evaluations of concepts and practice in teacher education, analyses of the challenge and potential of the new media, and guides to rigorous research design and methodology, periodicals and associations concerned with teacher education and instructional technology are also listed.

Dial Access in Education: A Series Three Collection From ERIC at Stanford

Henry T. Ingle. 1970. 9 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 038 875).

This pamphlet is designed to demonstrate what is available in the ERIC system on dial access in education, a retrieval technique which permits a large variety of learning materials to be electronically delivered to almost any destination. Ten annotated references published between 1962 and 1968 comprise the major part of the pamphlet.

Instructional Materials in the Classroom: A Basic Reference Shelf

1973. 19 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305 ($2.00). Check made payable to "Box E" must be included with order. EDRS price microfiche 75¢, hardcopy $1.50 (ED 082 495).

In an attempt to pull together a basic reference shelf on the use of instructional materials in the classroom, this bibliography contains 69 selected ERIC abstracts of the most relevant and up-to-date indexes, resource guides, directories, "how-to's", and state-of-the-art reviews dealing with the use of audiovisual materials in education. Selected so as to be particularly useful for education courses on instructional media and for teachers either in the classroom or in training, the abstracts are divided into sections according to publication type: indexes, directories and resource guides, catalogs, "how-to's" and textbooks, and state-of-the-art. Information provided with each abstract includes author, title, pages, availability, and price.

Instructional Technology Subject Matter Descriptors: A Subset of the ERIC Thesaurus

1971. 14 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 078 695).

A "mini-thesaurus" has been prepared by the ERIC Clearinghouse on Media and Technology. It is intended not only to provide a list of ERIC terms associated with instructional technology, but also to put those terms into an arrangement whereby an ERIC indexer or user who is not familiar with the area can find the right terminology for his retrieval problem. The terms are presented in three formats. They are categorized under the appropriate media or process--audio reproduction, computer technology, individualized instruction, etc.; they are listed alphabetically; and they are listed in a rotated form. An introductory statement clarifies the meaning of some of the "problem" terms in the thesaurus.

So You Want to Have a Film Made: A Guide for Film Sponsors

D.B. Jones and Stephen E. Longstreth. 1973. 22 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305. ($2.75) Checks made payable to "Box E" must be included with order. EDRS price microfiche 75¢, hardcopy $1.50 (ED 071 436).

The do's and don'ts of educational film production are briefly reviewed in this guide. Particular emphasis is given to the sponsor-filmmaker relationship and the various responsibilities of each. Also discussed are the reasons for either making or not making a film. The whole sequence of making

a film is presented from the selection of a producer and a budget to the actual script preparation and shooting. A glossary of terms and acronyms is provided. Sample formats of fiction and non-fiction scripts are shown.

The Instructional Effectiveness of Color in Television--A Review of the Evidence. Using Educational Media--Guides to the Literature, Series 1

Joseph H. Kanner. 1968. 11 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 015 675).

This document reviews a number of studies conducted to determine the effect of color in television on human learning, as measured by objective tests. The findings reveal an apparent lack of color effectiveness upon learning.

Audiovisual Materials in Support of Information Science Curricula: An Annotated Listing With Subject Index

Irving M. Klempner. 1971. 28 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 051 819).

The 195 audiovisual aids cited aim toward introducing students of library science to the rapidly evolving theory and technology of information science. Each item lists the title, length of film in minutes, a brief description of content, and the current availibility. A subject index is provided.

Instructional Media and the Handicapped

Wayne D. Lance. 1973. 41 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305 ($3.25). Check made payable to "Box E" must be included with order. EDRS price microfiche 75¢, hardcopy $1.85 (ED 084 853).

Recent developments in the design, application and evaluation of instructional materials and media for the handicapped are reviewed. The first section of the paper stresses the need for personalized education which meets individual needs through the matching of instructional programs to specific learners. Following this, significant curricular adaptions and classroom applications for five types of handicapped learners are summarized and current progress in the assessment of needs and in the development and evaluation of materials is cited. Advances in media utilization in teacher training programs are described and seven major delivery systems are outlined. Main conclusions reached include the following: 1)instructional technology has much to contribute to the personalization of instruction; 2)considerable progress has been made in the developement, evaluation and utilization of media and materials; and 3)the developing delivery systems contain within their present elements the seeds of a network capable of providing each handicapped learner the resources necessary to insure him a successful educational experience. A substantial bibliograph with 341 citations to documents dealing with instructional media and the handicapped is appended to the report.

Ethnic Studies and Audiovisual Media: A Listing and Discussion. An Occasional Paper From ERIC at Stanford

Harold A. Layer. 1969. 12 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 031 091).

Ethnic studies curricula may legitimately explore not only the historical, sociological, and cultura background of mixed ethnic groups, but may also examine alternative means of eliminating inequitie and injustices--means by which the powerless can obtain power. This media list offers titles and sources of 16mm films, audiotapes, filmstrips, filmstrips and records, videotapes, records, and transparencies which deal with the history and present reality of non-white minorities of this country. Most are geared for senior high school o college level audiences. Titles concerned with th arts, and with historical roots (e.g., Africa), an those of a strictly anthropological orientation have been excluded. Thirty-six titles deal with General Ethnic studies, eight with Asian-American studies, 136 with Black studies, 15 with Mexican/ Spanish-American studies, and 14 with Native American studies. The name and address of the distributor of each title is given, along with a descriptive phrase concerning the content.

The Effective Use of Media in Innovative Schools

Richard B. Lewis. 1973. 18 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305 ($2.00) Check made payable to "Box E" must be included with order. EDRS price microfiche 75¢, hardcopy $1.50 (ED 082 534).

Abstracts of 37 documents recently input to the Educational Resources Information Center (ERIC) ar compiled in this report. These documents were selected as being among the most significant of those dealing with the effective use of media in innovative schools and because they were of specia interest to district level administrators, curricu lum supervisors and media specialists. Reports dealing solely with computer assisted instruction a not included because this topic has been dealt wit separately in a recent publication of "The Best of ERIC: Recent Trends in Computer Assisted Instruction" (ED 076 025). The documents are grouped into the following categories: elementary

and secondary education; higher education, including community colleges; adult education; and developing countries. Each annotation contains an abstract of the document and information on its author, source, ERIC ED number or journal citation, and price. Also included are some hypotheses which seek to explain the causes for the apparent decline of innovative media programs and some suggestions about how to improve the reporting of such programs.

A Basic Reference Shelf on Facilities for Instructional Media. A Series One Paper From ERIC at Stanford

James D. Macconnell and Clarke E. Schiller. 1968. 14 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 019 012).

Annotated references encompass design, planning, construction costs, technical equipment, and teaching techniques for schools at all levels which utilize the new instructional media. Educational Facilities Laboratories, Inc. which has been established to encourage research, and applications of new ideas for the environments of growing institutions, has two regional centers, one at Stanford, and one at the University of Tennessee. School districts must be aware of and request the center's planning services in order to benefit from them.

Media and the Disadvantaged. Instructional Technology as the Equalizer for Disadvantaged Students

1973. 101 pages. Available From: Box E, School of Education, Stanford University, Stanford, California 94305($5.00) Check made payable to "Box E" must be included in order. EDRS price microfiche 75¢, hardcopy $5.40 (ED 076 061).

Representatives from seven media-oriented instructional programs for disadvantaged students met with staff members from the Educational Resources Information Center (ERIC) Clearinghouse on Media and Technology to discuss the philosophy underlying their efforts, means of developing instructional objectives and strategies, criteria for the selection of materials, and ways of evaluating performance. Topics discussed include the merits of locally developed materials versus those of commercial products, evaluation of the affective domain, role playing by children, the use of radio, the role of the teacher, factors influencing the choice of media, traits of the culturally different learner, and an inventory of priorities as seen by those working in the field. A glossary of selected terms, descriptions of the seven model projects, and the results of a survey of chief state school officers used to identify such projects are also included in the report.

Black Voices and Format Regulations: A Study in Black-Oriented Radio

Anthony J. Meyer. 1971. 31 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 048 754).

Based on a study of black-oriented broadcasting conducted in 1970, the purpose of this report is to discern and elucidate, rather than measure conclusively, the dynamics of its "success," emphasizing the potential of such stations to have a positive social impact on their communities. Fourteen black-oriented stations were visited, 30 license applications for such stations reviewed, and 150 interviews conducted in eight major cities with community leaders, station personnel, and broadcasting experts. Given that the purpose of FCC (Federal Communications Commission) control of permission to broadcast is to see that the public's convenience, interest, and necessity are served, and if black-oriented radio has the "audience power" that can be established for it by using a number of indicators, then it is the author's contention that black-oriented radio has failed to serve the public interest--a conclusion based on analyses of the"rhythm and blues" format as well as the specific programming employed by virtually all of these stations and on the apparent fact that their ownership and profit patterns are oriented to maximal profit. Two major scenarios for change are offered: community organization control of "non-profit" broadcasting facilities and/or forceful containment of the maximal profit motive in present ownership.

Renewing the Link Between Communications and Educational Technology

Keith W. Mielke. 1973. 44 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305 ($1.50) Check made payable to "Box E" must accompany order. Also available as an article in AV Communication Review; v20 n4, pp357-99, Winter 1972. Not available from ERIC (ED 071 386).

Written for those in educational technology and in general education, this report is intended to stimulate a reopening of dialogue and a renewed awareness of common interests between the disciplines of communication research and instructional media research. In stressing the more applied side of communication theory (i.e. those parts which seem more immediately relevant to educational technology), the report proceeds from a selective listing of recent books and anthologies in communication research to four areas of research or theory (passive learning, distraction, color, and functions of entertainment)

judged to have interesting potential implication for educational technology, and finally to six major applied, purposive communication projects.

A Guide to the Literature on Application of Communications Satellites to Educational Development

Robert P. Morgan and Jai P. Singh. 1972. 23 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 060 661).

Because of the ability of communications satellites to distribute electronic information (radio, television, digital computer data) over wide areas with potentially attractive costs, considerable interest has been shown in using satellite technology to enhance educational programs, both in the United States and in other countries. In view of these developments, this literature guide provides an introduction to satellite technology; to nontechnical aspects of satellites, including economic, organizational, social, political, and legal factors; and to educational and developmental uses of satellites, including experiments and systems planned or proposed. Also included is a basic reference shelf, providing the reader with a broad overview and a good starting point for a more detailed literature investigation, and a guide to organizations with interest in educational satellite utilization. A bibliography which lists other relevant entries concludes the paper.

A Review of Educational Applications of the Computer, Including Those in Instruction, Administration and Guidance. A Series Two Paper From ERIC at Stanford

Robert M. Morgan. 1969. 13 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 032 768).

The educational applications of computers for instruction, administration, and vocational guidance are herein reviewed. Reports on recent trends in computer-assisted instruction and computer-managed instruction toward forming behavioral objectives and reducing learning time and implementation costs provide an introduction for a description of the Office of Education's proposed program, a Computer Utility for Educational Systems (CUES). The CUES program, designed to provide demonstration centers of feasible and economic computer applications (including administrative data processing, a course in computer technology, integrated problem solving, and vocational training) is defined at some length, and the problems and costs of implementing computer systems are discussed. Next, the value of computers in career decision processes and in individualizing instruction (including the development of sequenced behavioral objectives) is illustrated through references to projects. Finally, barriers to change are examined and a case is presented for the utilization of a systems approach to effect educational improvement. A bibliography is included.

The Best of ERIC: Learning Resource Centers

Mayrelee Newman. 1973. 14 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305 ($2.00) Check made payable to "Box E" must be included with order. EDRS price microfiche 75¢, hardcopy $1.50 (ED 071 431).

Some 50 titles have been selected, abstracted, and categorized for this bibliography. They have also been divided into five educational subject areas: general topics; public school/early childhood; community/junior college; college/university; and adult education. The bibliography was designed specifically for learning lab coordinators, librarians, and media specialists. The listings are recent, no entry being more than two years old. The information contained ranges from instructional satellite systems and computer-assisted instruction guides to cataloging systems for non-print materials and model programs for elementary schools.

Sources of Information on Social Issues: Education, Employment, Public Health and Safety, Population, Etc. A Brief Guide for Journalists and Others. An Occasional Paper From ERIC at Stanford

William Paisley. 1969. 36 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 032 437).

An introduction which explains the value of information centers in aiding the flow of knowledge in person to person communication of information is followed by references to print sources and information centers. Print sources, listed to show continuity in the "people-print-people" cycle, are offered on the subjects of education, public health and safety, business, labor, employment, economics, and government. In addition the directories of the National Referral Center for Science and Technology which lead the search to other sources of information, are described. Information centers are listed according to the same subject areas as the above print sources, each reference containing a brief descriptive passage.

A Comparison of Guides to Non-Print Media

David E. Rawnsley. 1973. 41 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305 ($3.00) Check made payable to "Box E" must be included with order. EDRS price microfiche 75¢, hardcopy $1.85 (ED 083 837).

Information about 66 indexes and guides to non-print instructional media is provided. These sourcebooks, all published since 1970, were gathered primarily from a search of Research in Education (RIE), the index to the Educational Resources Information Center's (ERIC) document collection, and were selected as meeting the criteria of comprehensiveness, reliability, usefulness and timeliness. Thirty-six comprehensive guides which cover a number of content areas are reviewed; also cited are 30 publications which deal exclusively with one of the following subject areas: ecology, ethnic studies, guidance, health and drug abuse, the sciences and technology, teacher training and vocational education. An abstract is provided for each of the 66 citations, accompanied by information on the type of media covered by the guide, the educational level to which it is pertinent, its price, and the frequency of its publication. In addition, notation is made of whether the guide is cross-indexed and whether it contains publication dates, designates the intended audience, gives running times, provides content summaries and evaluations for its citations, and names the producers, distributors, prices and conditions of availability of the materials which it indexes.

Museums and Media: A Basic Reference Shelf With Museums and Media: A Status Report. A Series One Paper From ERIC at Stanford

Philip C. Ritterbush and Richard Grove. 1970. 16 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 044 935).

A status report on museums and media prefaces the annotated references listed in this paper. Futuristic proposals have been made for a Museum of Media that would be all media and no objects, and for a museum environment individualized by computer and visual previews of the galleries. The museums of today use films, slide-tapes, sound recordings, and electronic guide systems. Plans are being made for a Museum Computer Network. The important role that museums play in elementary and secondary education is represented in the references to books, papers, periodicals, and reports.

Understanding Research: Some Thoughts on Evaluating Completed Educational Projects. An Occasional Paper From ERIC at Stanford

Karlene H. Roberts. 1969. 32 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 032 759).

In order to make policy decisions, educators must evaluate educational research proposals and projects. Findings immediately related to practice are often inadequate, omitting the theoretical establishment of principles by which we can explain and predict the phenomena of our world. These theoretical linkages to the practical world of decision-making occur more frequently as researchers form more innovative hypotheses and design both innovative and rigorous investigative procedures. A research report should present a clear statement of what was studied, the method used in studying it; specification of how the data were analyzed, the results of the study, and conclusions and interpretations. The research evaluator must seek a logical presentation of the problem, since this will partially determine the researcher's ability to develop adequate methodology. The hypothesis must be defined, the sample chosen carefully for stated reasons, the design determined to be valid, and the dependent and independent variables defined and measured. Each study is only a single block in the construction of a theory applicable to educational policy making. No study is without flaws or takes into account all the variables of today's existing world. Knowledge of research evaluation, therefore, is essential.

Educational Radio: The Fifty-Year-Old Adolescent. ERIC/EBR Annual Review Paper

James Robertson and Gerald G. Yokom. 1973. 11 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305 ($1.50). Check made payable to "Box E" must be included with order. Also available as an article in Educational Broadcasting Review; v7 n2 April 1973 p107-115. EDRS price microfiche 75¢, hardcopy $1.50 (ED 074 728).

Contrary to the dismal expectations prevalent in the 1950's, educational radio has not only survived the phenomenal growth of educational television, but has shown unmistakable signs of health and maturity. Though some stations are still groping to overcome problems, others have moved steadily toward the goal of wider and better service for the community. The relationships between parent institutions and stations have become much stronger as the institutions realize the potential of the stations. Local community needs have gained priority in programing, and because of this, new sources of financing are being revealed. The Subsidiary Communications Authorizations of the Federal Communications Commission are being utilized for simultaneous broadcasting and community cable systems are being encouraged. These impressions were gathered by the authors from visits to 181 non-commercial educational radio stations throughout the United States.

An Analysis of University Policy Statements on Instructional Recordings and Their Re-Use. An Occasional Paper From ERIC at Stanford

Fred S. Siebert. 1968. 10 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 023 310).

The frequently recurring provisions, to be found in the policy statements of a selected group of 30 colleges and universities, concerning the production, use, and re-use of instructional recordings (visual and oral) can be divided for the purposes of analysis and comparison into four groups: ownership and copyright provisions, faculty rights, faculty compensation, and administration and review of policies. Almost all institutions which have adopted policies assign ownership to the university. Faculty rights have four major aspects: autonomy, internal re-use, external distribution, and revision and withdrawal. Almost all policy statements indicate that the instructor is responsible for the structure and the content of the recordings. A few have specific provisions for re-use, though a majority require the instructor to sign a release for external use prior to production, and many also require department approval when the recording is to be made available for distribution. The occasion for revision is usually determined by the instructor and/or the department. Faculty compensation is quite varied across the institutions surveyed. Outside persons participating in the recording are usually paid some type of flat fee. Nearly all policies contain provisions for an administrative and review body. A list of colleges whose policies are compared is appended.

Broadcasting and Education

Warren F. Seibert. 1972. 13 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 061 766). Also available as an article in Educational Broadcasting Review; v6 n3 p139-50 June 1972.

The educational broadcaster is like a man trying to ride two horses at once--the one horse is broadcasting technology and the other is education. The history of educational broadcasting has been marked by a succession of new technologies launched before the older ones were fully understood and used. The effects of the Corporation for Public Broadcasting, microteaching, instructional television fixed service (ITFS), radio, cable television, and video cassettes need careful examination. But a more pressing need exists; four problems require prompt consideration in order to clarify the field and its place in education--intra-educational relations, creative accommodation to change, professionalism, and learning research.

Instructional Television: The Best of ERIC

Warren F. Seibert. 1972. 34 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 062 830).

A computerized search of the information file in the national ERIC system revealed hundreds of reports and papers concerning instructional television; the author chose the most relevant for inclusion in this bibliography. The material is divided into categories: general; bibliographies, literature guides and overviews; national issues; and project reports. In addition, the ten newest papers on instructional television are listed separately. For each document the author, title, abstract, and complete ordering information are provided.

Instructional Television: The Best of ERIC

Warren F. Seibert. 1973. 27 pages. Available from: Box E, School of Education, Stanford University, Stanford, California 94305 ($2.00) Checks made payable to "Box E" must be included with order. EDRS price microfiche 75¢, hardcopy $1.85 (ED 082 535).

The abstracts presented herein represent the most significant of several hundred from the Educational Resources Information Center's (ERIC) collection. These were identified by a computer search of the subject of instructional television and serve to update an earlier bibliography published by the same author in April 1972. The compilation seeks to provide educational planners with an overview of the trends which will most influence future educational practice and to convey a sense of the growing significance of instructional television and related technologies. The documents are divided into nine categories: bibliographies and guides; overviews; children and television; cable television and telecommunication; continuing education, higher education and the open university; public television; international developments; general research; and miscellaneous. Each citation contains, in addition to the abstract, information on the author, title, original source and publication date, and instructions on how to order the complete document.

Education and Cable TV: A Guide to Franchising and Utilization

Jon Shafer. 1973. 47 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 071 432).

Designed to provide the educator with some answers about cable television (CATV), this monograph and resource catalog provides a basic description of CATV, its educational uses, and the franchising provisions which relate to its educational uses. The transition of CATV from an association with broadcast television toward cable information systems is a central theme of the document--its two-way capability, hands-on access, local origination, increased channel capacity, reduced costs, Federal Communications Commission rulings, and the implications of these technological advancements and policy changes for education and for society. Practical suggestions are made to the educator; information is provided about forces operating on cable's development; and recommendations are offered about franchising processes. In addition, alternative forms of ownership and extensions on "two-people-on-a-log" formatting are discussed. Appended are footnotes and a bibliography designed to help those who wish to readily examine any area in more detail.

After Data Collection: Coding-An Educational Research Tool.

Peter D. Shapiro. 1972. 14 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 061 770).

A brief and simple guide discusses the place and purpose of coding experimental data in the research process. The trade-offs involved unitizing data are reviewed; it is noted that a decision that increases reliability may reduce the validity of results, but without reliability there will be no validity at all. A discussion of categorizing data includes information on building the category set, the relationship of categories within a set, and designing the discrete-category code. Ways of calculating reliability are presented to allow the researcher to measure the equivalence of results when different coders classify the same data using the same set of categories.

Costs of Educational Media Systems. A Series II Occasional Paper From ERIC at Stanford

Michael G. Sovereign. 1969. 41 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 031 092)

Investigating the costs of instructional media systems necessitated that those systems be identified and analyzed, and that a methodology be formulated for estimating their costs, with reference to their area of operation: local, city, metropolitan, state, or regional school areas. Costs are broken down into cost per student per year, according to production costs, distribution costs, reception costs, and total cost for each instructional medium examined. These media are: airborne television, Instructional Television Fixed Service, satellite television, UHF (ultra high frequency) television, closed-circuit television, videotape recordings, film, radio, language laboratories, and dial access systems. A distinction is made between capital and operating costs, and a further breakdown of costs lists them according to whether the media are high quality, minimal, or derive from a national programing source. A significant pattern emerges: cost per student dips sharply as the area widens and the number of students increases for all media (videotape recording costs are in any case prohibitive). This pattern is a key factor in the recommendations for cost savings which postulate widespread use of media, improvement of production quality by the use of improved technology, and reorganization of educational systems in terms of the new technology.

The Invisible Medium: The State of the Art of Microform and a Guide to the Literature

Frances G. Spigai. 1973. 38 pages. Available from: Box E, School Education, Stanford University, Stanford, California 94305 ($3.00) Checks made payable to "Box E" must be included with order. EDRS price microfiche 75¢, hardcopy $1.85 (ED 075 029).

Thirteen micrographic events have been identified which are expected to have the greatest impact on the libraries of today and tomorrow. They can be divided into two groups: Nine are of a technological nature and involve micrographic products; the remaining four are basically educational in nature and reflect positive responses from the library community to a changing micrographic technology. Most of the 13 have taken place within the past five years. Only recently have most events become powerful enough to have an individual effect on library practice. It is at this point in time, however, that a true synergy of the influence of these events is rendering the current level of library-micrographic knowledge obsolete. The 13 events to be discussed within the framework of this report are briefly presented. The author describes the many types of microforms, explains the differences between each type, and discusses the uses, benefits, and drawbacks of the various microforms. Included are a discussion of related technological events of the past decade and a list of microform equipment. Many technical terms are defined such as those describing the reproduction process of the various microform types. Also included is an annotated bibliography of the literature of micrographics.

An Interactive Information Retrieval System: Case Studies on the Use of Dialog to Search the ERIC Document File

Michele Timbie and Don Coombs. 1969. 90 pages. EDRS price microfiche 75¢, hardcopy $4.20 (ED 034 431).

The first interactive (on-line) computerized use of the ERIC files by the U.S. Office of Education is reported in the form of an evaluation of the DIALOG system conducted at the ERIC Clearinghouse on Educational Media and Technology. Descriptions of the purposes of the study, of the DIALOG system (developed by Lockheed Missiles and Space Co.), and of the procedures involved in conducting a search of the ERIC file using Dialog are followed by information on the nine people, from various areas of education, who were asked to help evaluate the system. The major portion of the report, consisting of nine case studies, is based on the reactions of these evaluators (gathered in debriefing interviews) to one or more DIALOG searches which they themselves conducted. In addition, 19 evaluations (based on questionnaires from other system users) are presented. These, along with the nine original evaluations, stress the speed and "horizon-widening" effect of the system. A final section examines the variety of uses for the system at the Clearinghouse. The pre-DIALOG questions, the debriefing outline, and records of the evaluators' searches are appended.

A Basic Reference Shelf on Simulation and Gaming. A Series One Paper From ERIC at Stanford

Paul A. Twelker. 1970. 18 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 041 487).

A short, preliminary discussion of simulation and gaming outlines the various instructional and research techniques which come under the more general heading and lists the properties of each. Six sections of annotated, bibliographic entries serve as a guide to the literature on simulation and gaming. Documents are grouped under the following categories: general discussions of simulation and gaming, 2) media-ascendant simulation (learning through vicarious experience mediated by machines, films, pictures, etc.), 3) inter-personal ascendant simulation (characterized by decision-making, role playing, and player interaction), 4) games that do not involve simulation, 5) the use of simulation to assess performance (situational response testing), and 6)bibliographies. Centers where work is being done on simulation techniques, as well as the names of professional organizations concerned with these techniques are listed. Finally, the titles of journals and newsletters which carry current information on the field are provided.

Educational Simulation/Gaming

Paul A. Twelker and Ken Layden. 1972. 22 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 064 955).

A simple introduction to the techniques of simulation and gaming is offered, and several simulation/gaming applications are differentiated--non-simulation games, planning exercises, interpersonal simulation games, and large system simulation games. A chart compares various simulation/gaming applications for a large number of learning characteristics. An annotated bibliography lists both basic references and material for more experienced users of simulation/gaming. A directory gives the names and addresses for over 50 groups involved in simulation/gaming and describes each group's status, activities, level, and focus.

The Systematic Development of Instruction: An Overview and Basic Guide to the Literature

Paul A. Twelker and others. 1972. 29 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 059 629).

The systems approach in education is a management tool that allows individuals to examine all aspects of a problem, to interrelate the effects of one set of decisions to another, and to optimally use the resources at hand to solve the problem. Five systems approaches which have been used in the successful development of instruction at the classroom level can be identified: the Teaching Research Systems Approach, the Michigan State University Instructional Systems Development Model, the System Approach for Education Model, the Project MINERVA Instructional Systems Design Model, and the Banathy Instructional Development System Model. All of these models include actions that fall into the categories of problem definition and organization, systems analysis and development, and system evaluation. These actions are interrelated by feedback built into the model. Each of the different systems approaches, while addressing the same task in similar ways, performs with different descriptions and language. Which model best fits the developer's needs will depend on the particular audience being addressed, or the particular emphasis desired. (Annotated bibliographic references to the present instructional systems approach literature and to further exploration in instructional development are also included.)

Individualized Instruction: An Annotated Bibliography. A Series One Paper From ERIC at Stanford

Serena E. Wade. 1968. 22 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 029 519).

To provide material for decision or policy-makers with questions concerning policy, applications, and/or operations in the field of individualized

instruction, 31 published books, journals and ERIC documents are listed and annotated. Some 32 Elementary Secondary Education Act Title III innovative projects described in PACE abstracts are listed by ES number. Emphasis is placed on systems requirements of individualized instruction with special attention to different types of media. All material noted was published between 1964 and 1968.

Media and the Disadvantaged--A Review of the Literature

Serena E. Wade. 1969 26 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 027 741).

This review covers books, journal articles, and ERIC documents, 1966 and later. Much emphasis is placed on media program and project descriptions, rather than reports of completed research. The review points to trends of common media use and student performance and tries to shed some light on the general direction of future media efforts for the disadvantaged. These propositions are supported in the review: 1) media are useful in extending frames of reference and providing models and motivation for the disadvantaged; 2)media can emphasize each individual's approach to learning (thereby de-emphasizing the learning disadvantages with which some children come to school); 3) media can teach basic skills, but seem to be inadequate to teach assimilation skills to the disadvantaged; 4) projects that focus on older disadvantaged children or adults will have greater difficulty in achieving noticeable success in a short period of time, mainly because these individuals are more difficult to reach. Critique and marginal comments are provided by Adelaide Jablonsky. Bibliography, including ERIC document numbers, is included.

Individualized Learning. A Series Three Collection From ERIC at Stanford

Robert A. Weisgerber. 1972. 32 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 057 610).

Presented to provide an idea of the best ERIC documents available on individualized learning, this paper contains a collection of over 100 reports and papers that were put into ERIC in the last two or three years. The listings have been categorized topically, and each entry is provided with an ED number and ordering and price information. The first section contains selected bibliographies, including references to books, papers, pamphlets, articles and excerpts, and theses. A number of organizational, philosophical, and operational considerations are discussed in the papers in the second section. The third section offers research, assessment, and experimental findings; papers in the fourth section provide a somewhat broader look at the relation of media to the individualization process. Selected systems approaches to individualized learning, such as Project PLAN and Individually Prescribed Instruction, are presented separately in the fifth section, and entries dealing with selected institutional approaches comprise the sixth section. References which describe diagnostic and prescriptive individualization techniques for the handicapped and nonperformer conclude the paper.

Trends, Issues and Activities in Individualized Learning

Robert A. Weisgerber. 1972. 35 pages. EDRS price microfiche 75¢, hardcopy $1.50 (ED 057 633).

In this companion paper to his earlier annotated bibliography of ERIC materials on individualized instruction, the author defines individualized learning as the tailoring of the educational process which takes into account the unique qualities and needs of each individual. He identifies and comments on general trends which seem to be emerging in individualized instruction at the elementary and secondary level, in teacher education programs, and in other education programs. A selective list of the equipment, materials, and pre-packaged systems available to implement an individualized program is provided, along with a review of the major features of several major national systems--PLAN (Program for Learning in Accordance with Needs), IPI (Individually Prescribed Instruction), I/D/E/A (Institute for Development of Educational Activities, Inc.), IMS (Individualized Mathematics System), and SCI (Student Centered Instruction). A selected list of publications, meetings, and sources of information about individualization is presented for those who wish to explore the concept in more depth.

A Basic Reference Shelf on Interactive Use of Computers for Instruction. A Series One Paper From ERIC at Stanford

Karl L. Zinn. 1968. 2. pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 025 155).

A field of computer applications in education, characterized by continuous change in technology and nomenclature, is documented by diverse information sources. This paper names methods of organizing information on computer-based instructional systems and lists sources under literature surveys and reviews, conferences and symposia (1965-68, U.S.A.), publishers, and professional organizations. Interactive uses of computers for instruction include drill strategy, author-controlled tutorial, and "dialogue" tutorial; simulation and gaming; information handling,

computation and display (scholarly aids); computer aids for instructional management; and computer-based tools for the author and researcher. The variety of lessons, systems, and languages for computer-based instruction depends on instructional objectives and on records of student performance.

A Guide to the Literature on Interactive Use of Computers for Instruction. Second Edition. A Series One Paper From ERIC at Stanford

Karl L. Zinn and Susan McClintock. 1970. 33 pages. EDRS price microfiche 75¢, hardcopy $1.85 (ED 036 202).

To define the domain of interactive uses of computers for instruction and to characterize the variety of current activities is the purpose of this guide. Divided into seven sections, the guide provides an introduction and a definition of computer terms as used with instruction. One section deals with a variety of uses, another with a variety of lessons, systems and languages, and another with literature surveys, reviews and bibliographies. The last two sections deal with single meetings, conferences and symposia; professional organizations, publishers and commercial information services. It concludes with two appendixes and a bibliography.